

**REMARKS:**

In response to the Office Action mailed November 30, 2006, new claims 25-30 have been added. Although the Office Action indicates that claims 1-20 are pending, Applicants had canceled claims 11-20 without prejudice and added new claims 21-24 in the response filed on November 9, 2006. Therefore, claims 1-10 and 21-30 are currently pending.

In the Office Action, claims 1-7 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,045,570 (“the Epstein reference”) in view of U.S. Patent No. 6,162,240 (“the Cates reference”), and claims 8-10 were rejected under 35 U.S.C. § 103(a) as unpatentable over the Epstein reference in view of the Cates reference and further in view of U.S. Patent No. 6,562,059 (“the Edwards reference”). The status of claims 21-24 is unknown.

Because none of the cited references, either alone or in combination, discloses, teaches, or suggests the subject matter of the present claims, the rejections should be withdrawn.

Turning first to the Epstein reference, a closure device 21 is disclosed that includes a tubular member 22 including a main lumen 26 and a second lumen 27 communicating with a port 28 on the distal extremity 24. Col. 4, line 66 to col. 5, line 13. A closure assembly 32 is carried by the distal extremity 24 of the tubular member 22 and is coupled to a deployment mechanism 33 for movement from a contracted to an expanded position. Col. 5, lines 28-33. The deployment mechanism 33 includes a push-pull wire 41 extending from the closure assembly 32 out the proximal extremity 23 of the tubular member 22 and connected to a handle 44. Col. 5, line 65 to col. 6, line 10. A button 47 is provided on the handle 44 for moving the closure assembly 32 between the contracted and expanded positions. Col. 6, lines 14-24. The closure device 21 also includes biological sealant means 81 carried by the handle 44 and in

communication with the second lumen 27 for delivering sealant components via the external port

28. Col. 7, lines 1215; col. 6, lines 28-43.

During use, the closure device 21 is inserted into a sheath 111 in a puncture 106 extending to a vessel lumen 104 with the closure assembly 32 in the retracted position. Col. 9, lines 6-10; FIG. 5A. Once the distal extremity 24 of the tubular member 22 is exposed in the lumen 104, the sheath 111 is withdrawn, and the button 47 is retracted to expand the closure assembly 32. Col. 9, lines 10-23, 36-44. The tubular member 22 is then retracted *with the closure assembly 32* until the closure assembly 32 contacts the vessel wall 103 to form a seal. Col. 9, lines 54-60; FIG. 5B. A sealant 116 is then delivered through the second lumen 27 of the tubular member 22 and “through the exit port 28 which is adjacent the closure assembly 32.” Col. 10, lines 35-44; FIG. 5C. Once the sealant has assumed the desired state, the button 47 is moved to retract the closure assembly 32 back into the tubular member 22, and the closure device 21 is removed from the puncture 106. Col. 11, lines 3-16.

Thus, the Epstein reference does not teach or suggest a tubular member that is retractable proximally relative to an occlusion member. In contrast, the Epstein reference discloses a tubular member that remains fixed relative to a closure assembly, which is necessary because the tubular member is used to manipulate the closure assembly within a puncture and lumen.

Turning to the present claims, claim 1 recites an apparatus for sealing a puncture extending through tissue that includes a tubular member having a proximal end, a distal end sized for insertion into the puncture, and a lumen extending between the proximal and distal ends; an elongate occlusion member slidably disposed within the tubular member, the occlusion member comprising a proximal end, and a distal end extending distally through an opening in the

distal end of the tubular member; an expandable member on the occlusion member distal end; a delivery device coupled to the proximal end of the tubular member, the delivery device comprising a plunger that is advanceable to deliver a sealing compound into the tubular member lumen; and a retraction assembly coupled to the proximal end of the tubular member and to the occlusion member, the retraction assembly comprising a lock for securing the tubular member in a distal position relative to the occlusion member, and a trigger that is activated by advancement of the plunger to thereby disengage the lock, the retraction assembly being biased to retract the tubular member proximally relative to the occlusion member when the lock is disengaged.

The Epstein reference fails to disclose, teach, or suggest anything about a retraction assembly. In fact, the Epstein reference teaches against a retraction assembly that is biased to retract a tubular member proximally relative to an occlusion member, because the tubular member 22 of the Epstein reference is necessarily coupled to the closure assembly 32, as explained above.

Turning to the Cates reference, because the Epstein reference teaches against using a retraction assembly biased to retract a tubular member proximally relative to an occlusion member, there would be no motivation to combine the Cates reference with the Epstein reference, even if the Cates reference disclosed such a retraction assembly. On this basis, claim 1 and its dependent claims are not obvious over the Epstein and Cates references.

Further, the Cates reference fails to disclose, teach, or suggest a retraction assembly, as claimed. Instead, the Cates reference discloses an applicator 14 that includes a housing assembly 35 including a cylindrical body 45 and a hand grip 46, an introducer assembly 36 including a barrel 50 to house a collagen plug 12, and a retraction assembly 38 that withdraws the introducer

assembly 36 from around the collagen plug 12. Col. 6, lines 46-50, 60-61; col. 7, lines 1-3. The retraction mechanism 38 is attached to the barrel 50 to retract the barrel 50 into the body 45. Col. 7, lines 29-32. The retraction mechanism 38 includes ***a manually engagable actuator member 61*** that is intended ***to be manually engaged and pulled back*** toward the hand grip 46 pulling the barrel 50 to expose the collagen plug. Col. 7, lines 34-39.

Thus, the Cates reference merely discloses an actuator member 61 that may be pulled by a user to disengage a ratchet pawl 62 and ***manually*** retract the barrel. The Cates reference does not teach or suggest a retraction mechanism that is biased to retract a tubular member proximally relative to an occlusion member when a lock is disengaged. Further, the Cates reference fails to disclose, teach, or suggest a trigger that is activated by advancement of a plunger. Instead, the Cates reference discloses a manual actuator member 61 that may be pulled to disengage a ratchet pawl. Accordingly, even if the Cates reference could be properly combined with the Epstein reference, the combined teachings fail to render claim 1 and its dependent claims obvious.

The Edwards reference also fails to provide any additional teaching or suggestion absent from the Epstein and Cates references to render claim 1 obvious.

Similarly, new claim 25 and its dependent claims are not obvious over the Epstein and Cates references. Claim 25 recites a retraction assembly coupled to the proximal end of the tubular member and to the occlusion member, the retraction assembly comprising a lock for securing the tubular member in a distal position relative to the occlusion member, and a trigger that is activatable to disengage the lock, the retraction assembly being biased to automatically retract the tubular member proximally relative to the occlusion member when the lock is disengaged while delivering the sealing compound out the distal end of the tubular member.

None of the cited references discloses, teaches, or suggests, a retraction assembly biased to automatically retract generally, nor a retraction assembly biased to automatically retract a tubular member proximally relative to an occlusion member when a lock is disengaged while delivering the sealing compound out the distal end of the tubular member specifically. Accordingly, claim 25 and its dependent claims are also not obvious over the cited references.

Finally, claims 21-24 were not addressed in the Office Action, and Applicants submit that these claims are also neither anticipated by nor obvious over the cited references. None of the cited references discloses, teaches, or suggests an apparatus that includes inner and outer members coupled to an expandable member having a variable length dimension, nor a housing on the proximal end of the outer member, the housing comprising a chamber in fluid communication with the inflation lumen, a piston slidably disposed within the chamber and coupled to the inner member, a reservoir filled with inflation media and in fluid communication with the chamber, and an actuator that may be activated by a user to direct the inflation media from the reservoir into the chamber and inflation lumen, thereby substantially simultaneously expanding the expandable member and directing the piston proximally to thereby pull the inner member proximally to shorten the expandable member as it expands, as claimed.

//

//

//

//

//

In view of the foregoing, it is submitted that the claims now presented in this application define patentable subject matter over the cited prior art. Accordingly, reconsideration and allowance of the application is requested.

Respectfully submitted,

VISTA IP LAW GROUP LLP

By

William A. English  
Reg. No. 42,515  
Attorneys for Applicants

Dated: March 30, 2007

2040 Main Street, 9<sup>th</sup> Floor  
Irvine, CA 92614  
Telephone: (562) 665-3953  
Facsimile: (949) 625-8955